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ABSTRACT

This questionnaire study examined the level of knowledge of first aid of 138 educators in private and state preschools in Turkey. Questionnaires were completed by educators between May and July 1997. The findings indicated that about 17 percent of the educators thought that they had sufficient first aid knowledge, with 62 percent indicating that they had no first aid training. About 68 percent of the educators had encountered situations in the preschool in which they had to administer first aid. A greater number of educators who had received first aid training than those without training described the correct procedure for dealing with a number of injury situations, including nose bleeds, fractures, and drinking caustic substances. In addition, significantly more university than high school graduates gave correct answers for dealing with stopping of respiration, electrical shock, fractures, drinking caustic substances, and insect stings and bites. The results suggest that first aid training is necessary for all educators. (KB)

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A STUDY ON THE LEVEL OF THE FIRST AID KNOWLEDGE OF EDUCATORS WORKING IN PRESCHOOLS

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SUMMARY

The purpose of this study is to determine the level of knowledge of first aid of the educators working in preschools. The data were collected by using face to face questionnaire method that involved 138 educators working in private and official preschools in the period from May to July 1997. 16.7 % of the educators participated in our study were of the opinion that their first aid knowledge was sufficient. Besides 62.3 % of the educators stated that they had not taken any first aid training at all. On the other hand, 68.8 % of the educators mentioned that they had faced with a case involving children whom they were training that required application of first aid.

The answers of the educators who did or did not take the first aid training, regarding to the applications of first aid in different cases were compared statistically. The differences among the findings on the first aid applications such as, stopping of respiration ($p<0.01$), nosebleeding ($p<0.05$), fractures ($p<0.01$), insertion of foreign objects in the nose or ear ($p<0.01$), drinking caustic substances ($p<0.05$), insect stinging and biting ($p<0.05$), faint ($p<0.001$) were found to be significant. On the other hand, the differences between findings obtained from high school and university graduates on first aid applications such as, stopping of respiration ($p<0.05$), electrical shock ($p<0.05$), fractures ($p<0.05$), drinking caustic substance ($p<0.05$) and insect stinging and biting ($p<0.01$) were also determined to be significant.

According to the results, a necessity exists for first aid training for all educators, particularly in the case of those who deal with preschool children. For this reason, we are of the opinion that, educators should be equipped with a sufficient knowledge and skill concerning the first aid during their education and should undergo jobtraining occasionally.

INTRODUCTION

The accidents are the subjects which should be considered firmly, and closely related to the public health. The group which is most frequently faced with the accidents is children. The accident in between the age of one and maturity could cause fatal cases (Romer & Manciaux, 1991). Children are subjected to different accidents in every age. Therefore, it is possible to prevent children from the accident and save their lives by simple measure in the houses, schools and the playgrounds (Unicef, 1991).

An individual may face to the situations which require first aid in any instance during his or her life. It is possible to save a life by first aid measures which are sum of the effective and significant applications to be taken on time.

This study is carried out for the purpose of evaluating the first aid knowledge of the educators working in preschools.

MATERIAL AND METHOD

Interview Group
They were 138 educators in total, working in both eight private and twelve state preschools in Ankara in Turkey.

Collecting of Data
The data have been collected by applying the questionnaire face to face to educators in three months period (May to July 1997).

Analysis of Data
All the data have been coded and analysed by SPSS Statistical Computer Program. The answers of educators who are either high school or university graduates and either trained or untrained in first aid are compared according to the first aid applications. Chi-square (x^2) values are calculated and their significances were evaluated statistically.

FINDINGS

Table 1: Distribution of educators in respect of educational levels

EDUCATIONAL LEVEL	EDUCATOR n	EDUCATOR %
High school graduate	77	55,8
University graduate	61	44,2
TOTAL	138	100,0

Table 2: Distribution of educators in respect of tasks in the institution

TASKS IN THE INSTITUTION	EDUCATOR n	EDUCATOR %
Teacher	109	79,0
Director	29	21,0
TOTAL	138	100,0

Table 3: Distribution of educators in respect of working period

WORKING PERIOD	EDUCATOR n	EDUCATOR %
Less than 1 year	35	25,4
1-3 years	44	31,9
4-6 years	27	19,5
More than 6 years	32	23,2
TOTAL	138	100,0

Table 4: Distribution of educators in respect of having relatives employed in the health sector

STATE OF HAVING RELATIVES EMPLOYED IN THE HEALTH SECTOR	EDUCATOR n	EDUCATOR %
Yes	48	34,8
No	90	65,2
TOTAL	138	100,0

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Table 5: Distribution of educators in respect of having first aid training

STATE OF HAVING FIRST AID EDUCATION	EDUCATOR	
	n	%
Yes	52	37.7
No	86	62.3
TOTAL	138	100.0

Table 6: Distribution of educators in respect of first aid training places

PLACE OF FIRST AID EDUCATION (n=52)	EDUCATOR	
	n	%
During education	23	44.2
Driving-guidance courses	29	55.8
TOTAL	52	100.0

Table 7: Distribution of educators in respect of first aid training period

FIRST AID TRAINING PERIOD (n=52)	EDUCATOR	
	n	%
Less than 10 hours	28	53.8
10-20 hours	21	40.4
More than 20 hours	3	5.8
TOTAL	52	100.0

Table 8: Distribution of educators in respect of making use of first aid references

FIRST AID REFERENCES USED	EDUCATOR	
	n	%
Yes	76	55.1
No	62	44.9
TOTAL	138	100.0

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Table 9: Distribution of educators in respect of the type of first aid reference used

TYPE OF THE FIRST AID REFERENCE USED(n=76)	EDUCATOR	
	n	%
Publications	20	26.3
Visual-audible broadcast	5	6.6
Conference,course,seminar	8	10.5
Reference person	8	10.5
Other*	35	46.1
TOTAL	76	100.0

*The educators in this group stated that they used more than one reference.

Table 10: Distribution of educators in respect of their meeting cases requiring first aid

MEETING A CASE REQUIRING FIRST AID	n	%
Yes	95	68.8
No	43	31.2
TOTAL	138	100.0

Table 11: Distribution of educators in respect of the type of first aid cases they met

CASES MET (n=95)	n	%
Nosebleed	86	90.5
High fewer	74	77.9
Head injuries	53	55.8
Insect sting and bites	20	21.1
Foreign substance entrance into the nose or ear	10	10.5
Faints	9	9.5
Fractures	8	8.4
Burns	5	5.3
Stopping of respiration	3	3.2
Foreign substance entrance into the eye	2	2.1

*Since more than one choice is marked, percentage of each one is taken in itself

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Table 12: Distribution of trained and not trained educators in respect of first aid applications in cases requiring first aid

	FIRST AID TRAINING					
	Trained (n=52)		Not Trained (n=86)		TOTAL	
Foreign substance entrance into the trachea	n	%	n	%	n	%
Right	38	73.1	54	62.8	92	66.7
Wrong	4	7.7	9	10.5	13	9.4
Does not know	10	19.2	23	26.7	33	23.9
	x^2=1.544	p>0.05				
Stopping of respiration						
Right	38	73.1	37	43	75	54.3
Wrong	8	15.4	33	38.4	41	29.7
Does not know	6	11.5	16	18.6	22	15.9
	x^2=12.164	p<0.01				
Nosebleed						
Right	45	86.5	62	72.1	107	77.5
Wrong	5	9.6	5	5.8	10	7.2
Does not know	2	3.8	19	22.1	21	15.2
	x^2=8.609	p<0.05				
Earbleed						
Right	1	1.9	0	0	1	0.7
Wrong	17	32.7	22	25.6	39	28.3
Does not know	34	65.4	64	74.4	98	71
	x^2=2.606	p>0.05				
Burns						
Right	48	92.3	76	88.4	124	89.9
Wrong	1	1.9	0	0	1	0.7
Does not know	3	5.8	10	11.6	13	9.4
	x^2=2.890	p>0.05				
Electrical shock						
Right	50	96.2	75	87.2	125	90.6
Wrong	0	0	0	0	0	0.0
Does not know	2	3.8	11	12.8	13	9.4
	x^2=3.038	p>0.05				
Fractures						
Right	36	69.2	35	40.7	71	51.4
Wrong	13	25	44	51.2	57	41.3
Does not know	3	5.8	7	8.1	10	7.2
	x^2=10.749	p<0.01				
Head injuries						
Right	28	53.8	31	36	59	42.8
Wrong	1	1.9	1	1.2	2	1.4
Does not know	23	44.2	54	62.8	77	55.8
	x^2=4.531	p>0.05				

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Foreign substance insertion into the ear or nose						
Right	41	78.8	44	51.2	85	61.6
Wrong	3	5.8	3	3.5	6	4.3
Does not know	8	15.4	39	45.3	47	34.1
	x^2=12.963	p<0.01				
Drinking caustic substance						
Right	12	23.1	11	12.8	23	16.7
Wrong	21	40.4	25	29.1	46	33.3
Does not know	19	36.5	50	58.1	69	50
	x^2=6.326	p<0.05				
Insect stings and bites						
Right	11	21.2	12	14	23	16.7
Wrong	34	65.4	47	54.7	81	58.7
Does not know	7	13.5	27	31.4	34	24.6
	x^2=5.874	p<0.05				
High fever						
Right	49	94.2	81	94.2	130	94.2
Wrong	0	0	0	0	0	0.0
Does not know	3	5.8	5	5.8	8	5.8
	x^2=0.000	p>0.05				
Faints						
Right	40	76.9	38	44.2	78	56.5
Wrong	2	3.8	7	8.1	9	6.5
Does not know	10	19.2	41	47.7	51	37
	x^2=14.155	p<0.001				
Foreign substance entrance into the eye						
Right	15	28.8	25	29.1	40	29
Wrong	9	17.3	20	23.3	29	21.0
Does not know	28	53.8	41	47.7	69	50
	x^2=0.793	p>0.05				
Fishing line injury on the hand						
Right	6	11.5	10	11.6	16	11.6
Wrong	5	9.6	5	5.8	10	7.2
Does not know	41	78.8	71	82.6	112	81.2
	x^2=0.701	p>0.05				
Sharp object injury on the body						
Right	22	42.3	39	45.3	61	44.2
Wrong	6	11.5	17	19.8	23	16.7
Does not know	24	46.2	30	34.9	54	39.1
	x^2=2.436	p>0.05				

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Table 13: Distribution of high school graduate and university graduate educators in respect of first aid applications in cases requiring first aid

	EDUCATIONAL LEVEL					
	High School Graduate(n=77)		University Graduate(n=61)		TOTAL	
Foreign substance entrance into the trachea	n	%	n	%	n	%
Right	50	64.9	42	68.9	92	66.7
Wrong	7	9.1	6	9.8	13	9.4
Does not know	20	26.0	13	21.3	33	23.9
	x^2=0.408	p>0.05				
Stopping of respiration						
Right	34	44.2	41	67.2	75	54.3
Wrong	27	35.1	14	23	41	29.7
Does not know	16	20.8	6	9.8	22	15.9
	x^2=7.567	p<0.05				
Nosebleed						
Right	59	76.6	48	78.7	107	77.5
Wrong	4	5.2	6	9.8	10	7.2
Does not know	14	18.2	7	11.5	21	15.2
	x^2=2.036	p>0.05				
Earbleed						
Right	0	0	1	1.6	1	0.7
Wrong	19	24.7	20	32.8	39	28.3
Does not know	58	75.3	40	65.6	98	71
	x^2=2.510	p>0.05				
Burns						
Right	68	88.3	56	91.8	124	89.9
Wrong	1	1.3	0	0	1	0.7
Does not know	8	10.4	5	8.2	13	9.4
	x^2=1.012	p>0.05				
Electricity shock						
Right	66	85.7	59	96.7	125	90.6
Wrong	0	0	0	0	0	0.0
Does not know	11	14.3	2	3.3	13	9.4
	x^2=4.833	p<0.05				
Fractures						
Right	33	42.9	38	62.3	71	51.4
Wrong	36	46.8	21	34.4	57	41.3
Does not know	8	10.4	2	3.3	10	7.2
	x^2=6.127	p<0.05				
Head injuries						
Right	27	35.1	32	52.5	59	42.8
Wrong	1	1.3	1	1.6	2	1.4
Does not know	49	63.6	28	45.9	77	55.8
	x^2=4.354	p>0.05				

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Foreign substance insertion into the ear or nose						
Right	45	58.4	40	65.6	85	61.6
Wrong	2	2.6	4	6.6	6	4.3
Does not know	30	39.0	17	27.9	47	34.1
	x^2=2.738	p>0.05				
Drinking caustic substance						
Right	7	9.1	16	26.2	23	16.7
Wrong	28	36.4	18	29.5	46	33.3
Does not know	42	54.5	27	44.3	69	50
	x^2=7.198	p<0.05				
Insect stings and bites						
Right	7	9.1	16	26.2	23	16.7
Wrong	45	58.4	36	59	81	58.7
Does not know	25	32.5	9	14.8	34	24.6
	x^2=10.335	p<0.01				
High fever						
Right	70	90.9	60	98.4	130	94.2
Wrong	0	0	0	0	0	0.0
Does not know	7	9.1	1	1.6	8	5.8
	x^2=3.461	p>0.05				
Faints						
Right	38	49.4	40	65.6	78	56.5
Wrong	7	9.1	2	3.3	9	6.5
Does not know	32	41.6	19	31.1	51	37
	x^2=4.346	p>0.05				
Foreign substance entrance into the eye						
Right	17	22.1	23	37.7	40	29
Wrong	20	26	9	14.8	29	21.0
Does not know	40	51.9	29	47.5	69	50
	x^2=5.039	p>0.05				
Fishing line injury on the hand						
Right	5	6.5	11	18	16	11.6
Wrong	6	7.8	4	6.6	10	7.2
Does not know	66	85.7	46	75.4	112	81.2
	x^2=4.426	p>0.05				
Sharp object injury on the body						
Right	34	44.2	27	44.3	61	44.2
Wrong	15	19.5	8	13.1	23	16.7
Does not know	28	36.4	26	42.6	54	39.1
	x^2=1.168	p>0.05				

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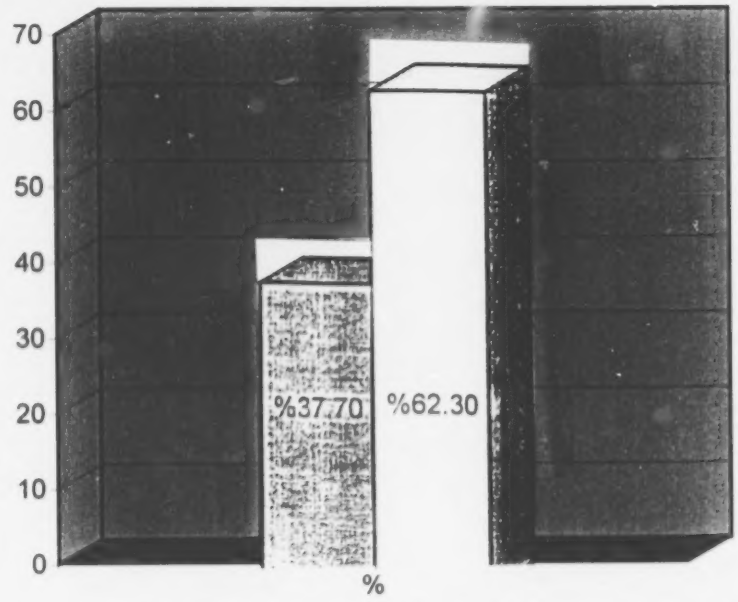

Figure1. Graphical examination of distrubution of educators in respect of having first aid training.

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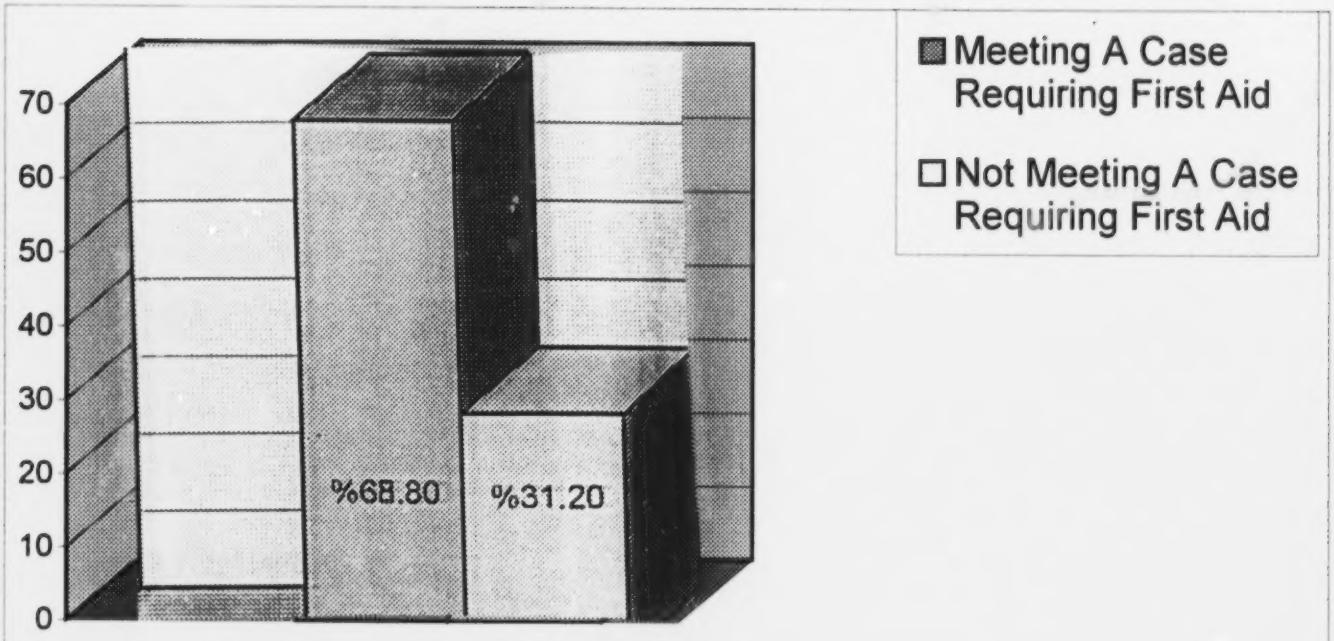

Figure 2. Graphical examination of distribution of educators in respect of their meeting cases requiring first aid.

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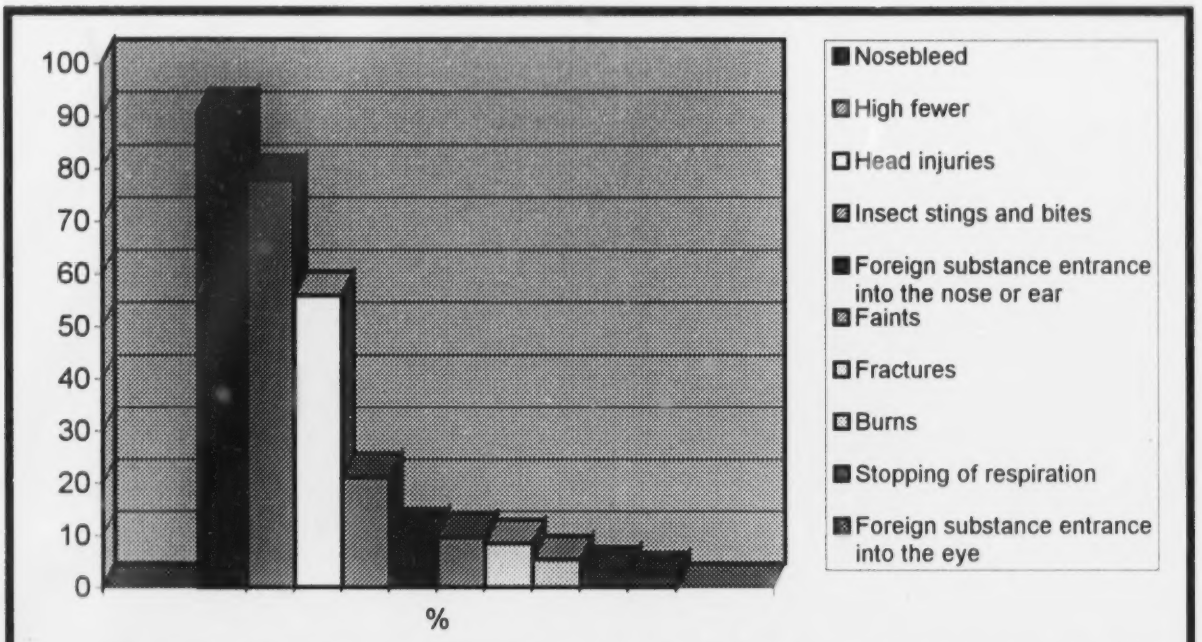

Figure 3. Graphical examination of distribution of educators in respect of the type of first aid cases they met.

RESULTS AND DISCUSSION

It is known that childhood accidents occur mostly in houses and then playgrounds, streets, schools and rarely in workplace (Ege,1981; Ferguson,1994; Ceyhan,1995). Teachers who educate preschool children have a vital educational role in the accident prevention (Avery & Jackson, 1993). If it is taken into account that the preschool children are the most active, it is clear that they face to an accident in high risk.

It is found out in our sudy that 62.3 % of educators have not taken first aid training (Table 5) (Figure 1), moreover it is also determined that only 5.8% of educators have taken first aid training more than 20 hours (Table 7). The findings getting our study, is seen that the educators' number applying right first aid is low.

In addition, 68.8 % of the educators mentioned that they had faced with a case involving children whom they were training that required application of first aid (Table 10) (Figure 2). When the first aid cases the educators met are examined, it is seen that the most frequently met three cases are nosebleed (90.5 %), high fever (77.9 %) and head injuries (55.8 %) (Table 11) (Figure 3). It is also stated in the study of Nazik carried out in 1997, that the most frequently met house accidents are nosebleed (28.8 %) and injuries (cut injury 26.3 %, crush injury 22.9 %)

16.7 % of the educators participated in our study were of the opinion that their first aid knowledge was sufficient. It is stated in the study performed in 1994 by Carter et. al. aiming to determine the role of the teacher of children aged between three and eleven years in child accident prevention, a minority teacher felt that they had enough background information or training on the subject and first aid instruction was particularly requested. The findings show that the majority of the educators have met cases requiring first aid for preschool children, although it is showed that the educators included in our study state that they do not find their first aid knowledge sufficient.

When the educators in our study are asked to rank the subjects about which their knowledge is lacking, it is observed that the educators pay more importance to the cases which are less frequently met but which cause vital danger more than the cases which are more frequently met.

The findings show that the majority of the educators do not know the difference between first aid and emergency treatment very well. Furthermore, only 10.1% of the educators gave right answers about the materials that should be kept in the first aid board / case. The findings show that the educators do not have sufficient knowledge about the materials that should be kept in the first aid board / case.

The existance of medicine in the first aid board / case of the preschools brought forward both wrong and dangerous results as, when needed medicine recovery is performed instead of first aid applications without health professions and even parent permission.

When the findings about the first aid applications performed by the trained and untrained educators were examined, it is determined that the significant difference between the trained and untrained groups about stopping of respiration ($p<0.01$) and fracture ($p<0.01$) resulted from the excess "right" answers of the trained group. It is also determined that the significant difference between the trained and untrained groups about nosebleeding ($p<0.05$), insertion of foreign objects in the nose or ear ($p<0.01$), drinking caustic substances ($p<0.05$), insect stinging and biting ($p<0.05$) and faint ($p<0.001$) resulted from the excess "I don't know" answers of the untrained group (Table 12).

When the findings about the first aid applications performed by the high school and university graduates educators were examined, it is determined that the significant difference between high school and university graduates about drinking caustic substance ($p<0.05$) resulted from the excess "right" answers of the university graduate educators. It is

also determined that the significant difference between the high school and university graduates educators about stopping of respiration ($p<0.05$), electrical shock ($p<0.05$), fractures ($p<0.05$), and insect stinging and biting ($p<0.01$) resulted from the excess "I don't know" answers of the high school graduate educators (Table 13).

According to the results, it is found that the first aid applications performed by the trained and university graduates educators have more correct answers than the untrained educators and the high school graduate educators.

SUGGESTIONS

The accidents met in the preschool children generally result in injuries that could be prevented. The children of this age who are highly active, want to know everything and are investigative, depending on playing in unsafe playgrounds and having little or no adult supervision are at risk for serious injuries (Harris, 1986). It has been possible to minimize the accident risk with simple precautions taken or if injury took place, to save the lives of children with simple first aid applications. The suggestions for this subjects can be classified as;

** Firstly children (Romer & Manciaux, 1993) and then parents and teachers who spend more time for this age of children must be educated (Avery & Jackson, 1993).*

** Besides, it can be suggested to include "first aid" courses for all institutes (vocational high schools and faculties) that train educators. We are of the opinion that, it will be usefull for educators of preschool children to be equipped with a sufficient knowledge and skill concerning the first aid during their education and should undergo related jobtraining occasionally.*

** Adequate precautions should be taken for the places like classrooms, corridors, gardens, etc. where the children are all together, stairs, balconies and windows should be*

secured for the children and the presence of toys with small parts, sharpened edged pencils and similiar materials, materials like nylon bags, ropes, strings should be avoided and the power-plugs should be out of children's reach or should be covered. Playgrounds in the schools should be securely designed and the precautions for the production and usage of the toys in the classroom should be taken into consideration (Avery & Jackson, 1993). And also even for a little period of time no two children should be left alone.

** It is very important that the application forms for preschool entrance should be carefully filled by the parents in order to take adequate information for the children in cases of need. Besides, it is also a case of attention to keep correct hospital records about the accidents as they will lead the further studies.*

It must never be forgotten that the life of a child can be saved and disabilities that would remain for the whole life can be prevented with simple and easy applications.

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